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RESEARCH PAPER

A study on nutritional assessment of jaundice patient and its prevalence in urban areas of Faizabad district

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ABSTRACT : Jaundice is a common problem in medical and surgical gastroenterological practice. Its cause can often be correctly anticipated clinically but usually investigations are required for confirmation. It could be because of a variety of causes and is less commonly seen outside the gastroenterology and hepatobiliary surgery. Information on the prevalence of jaundice in the inhabitants of four hospitals namely Chiranjeev, Chinmay, Vaishnavi and Janki was very scanty. For the collection of information, 400 patients were assessed in which 60 patients were selected randomly in which 66.67 per cent were male and 33.33 per cent were female. The main objectives of the study were to find out the prevalence, their nutritional status and dietary pattern. In present study, the serum bilirubin level was assessed for the confirmation of the jaundice in patients. The different types of test relevant to jaundice were also assessed. The findings of the study showed that out of 60 patients (100%), 58(98%) patients had the serum bilirubin level in the range of 1.0 to 5.0 mg/dl which showed mild symptoms and 2 (2%) patients had the serum bilirubin level in the range of more than 10.0 mg/dl which showed severe symptoms in the patients.

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Jaundice is not a disease, but rather a sign that can occur in many different diseases. It is the yellowish staining of the skin and sclerae (the whites of the eyes) that is caused by high levels in blood of a chemical bilirubin. The colour of the skin and the whites of the eyes vary depending on the level of bilirubin. When the bilirubin level is mildly elevated, they are yellowish. When the bilirubin level is high, they tend to be brown.

The liver has many functions :

One of its functions is to produce and secrete bile into the intestines to help digest dietary fat. Another function is to remove toxic chemicals or waste products from the blood and bilirubin is a waste product. The liver removes bilirubin from the blood. After the bilirubin has entered the liver cells, the cells conjugate (attaching other chemicals, primarily glucuronic acid) to the bilirubin, and then secrete the bilirubin/glucuronic acid complex into bile. The complex that is secreted in bile is called conjugated bilirubin. The conjugated bilirubin travels in the bile to the intestine and is eliminated in the feces. (Bilirubin is what gives feces its brown colour.) Conjugated bilirubin is different

from the bilirubin that is released from the red blood cells and not yet removed from the blood. The latter is termed unconjugated bilirubin (Davis, 2012).

Jaundice occurs when there is:

Too much bilirubin being produced for the liver to remove from the blood (for example, patients with hemolytic anemia have an abnormally rapid rate of destruction of their red blood cells that releases large amounts of bilirubin into the blood);

A defect in the liver that prevents bilirubin from being removed from the blood, converted to bilirubin/ glucuronic acid (conjugated) or secreted in bile; or

Blockage of the bile ducts that decreases the flow of bile and bilirubin from the liver into the intestines. For example, the bile ducts can be blocked by cancer, gallstones, or inflammation of the bile ducts. The decreased conjugation, secretion, or flow of bile that can result in jaundice is referred to as cholestasis: however, cholestasis does not always result in jaundice.

It is the disease causing the jaundice rather than the jaundice itself that causes most problems associated with jaundice. Specifically, if the jaundice is due to liver disease, the patient may have symptoms or signs of liver disease or cirrhosis (cirrhosis represents advanced liver disease). The symptoms and signs of liver disease and cirrhosis include fatigue, swelling of the ankles, muscle wasting, ascites (fluid accumulation in the abdominal cavity), mental confusion, coma, and bleeding into the intestines (Davis, 2012). The following objectives are:

–To know about the prevalence of jaundice in hospitalized patients.

–To find out the nutritional status and dietary pattern of the patient.

RESEARCH METHODOLOGY

The present study entitled "A study on Nutritional Assessment of Jaundice Patient and its Prevalence in urban areas of Faizabad district" was conducted using the following methodology :

Study of the locality :

Chiranjeev hospital, Janki hospital, Chinmay Surgical Centre and Vaishnavi hospital of Faizabad district in Uttar Pradesh were selected purposively for the study as it is a district with population rapidly changing their life style and living pattern. That area was suitable for the collection of required data. Further, it was convenient to carry out the research there.

Sample selection :

The name was arranged alphabetically and 15 patients were selected randomly from each of the area, thus, a total of the 60 patients were identified and every patient was selected for the present study.

Method of enquiry and data collection :

Pre-tested and pre-structured interview schedule was used for the collection of the data from the respondents. The interview schedule included the following information.

General profile survey :

This section was covered the aspects including respondents name, age and sex, type of family and occupation of family all these are important for knowing the respondents socio-economic status.

Dietary information :

A diet survey was conducted as described by Swaminathan (2003). Information related to dietary pattern, food habits, food intake and food frequency was recorded. The prescription given by doctor was also collected.

Anthropometric measurement :

Nutritional anthropometry was concerned with the measurement of variations of physical dimensions.

Height :

Height (cm) of the subjects was taken with the help of a measuring tape by sticking it to the wall. The subject was made too stand erect, looking straight, buttocks, shoulders and head touching the wall, hell together, toes apart and hands hanging loosely by the side. Three consecutive reading were taken and the mean value was recorded Srilakshmi (2007).

Weight :

The weighting scale with maximum capacity of 120kg and the minimum division of 0.5 kg was used to weight all the subjects. The respondents were made to stand erect on the weighting scale, with minimum clothes,

without footwear, not leaning against or holding anything and the weight was recorded in kg. The measurement is made to the nearest 0.1 kg. Three consecutive reading were taken for all subject and the mean value was recorded. The scale was adjusted to zero after each measurement Srilakshmi (2007).

Clinical signs and symptoms :

The eyes, nails, lips, toungs, gums, neck and general appearance of each subject were examined, in order to find out if any sign of nutritional deficiency is present. The clinical symptoms were checked such as general appearance, conjunctiva, face, body, palm and sole, appetite (Swaminathan, 2003).

Statistical analysis :

The data obtained were tabulated and statistically analyzed by using following normal frequency distribution method:

$$\text{Percentage (\%)} = \frac{\text{Number of the respondents (n)}}{\text{Total number of the respondents (N)}} \times 100$$

RESULTS AND DISCUSSION

Table 1 shows that the maximum frequency (66%) of male than female (33.33%) was suffering from jaundice.

Table 1 : Gender of the patients

Particular		n=60
Gender	Frequency	%
Male	40	66.67
Female	20	33.33

Table 2 shows that the 66.67 per cent of the family were vegetarian followed by 28.33 per cent non-vegetarian and 5 per cent eggetarian.

Table 2 : Group of the patients

Particular		n=60
Group	Frequency	%
Vegetarian	40	66.67
Non-vegetarian	17	28.33
Eggetarian	3	5

Table 3 shows that the 56.67 per cent of the patient were taking type (a) meal which included breakfast + lunch + dinner followed by 31.67 per cent of type (b) included breakfast + lunch + snacks + dinner and 11.67 per cent of type (c) included breakfast + mid-morning + lunch + snacks + dinner.

Table 3 : Types of meal taken by the patients

Particular		n=60
Type of meal	Frequency	%
Type (a)	34	56.67
Type (b)	19	31.67
Type (c)	7	11.67

Table 4 shows that the 51.67 per cent of the patients were taking fried foods followed by 43.33 per cent roasted and baked foods, 3.33 per cent boiled and 1 per cent steamed foods.

Table 4 : Types of food taken by the patients

Particular		n=60
Type of food	Frequency	%
Boiled	2	3.33
Fried (shallow/deep)	31	51.67
Roasted and baked	26	43.33
Steamed	1	1.67

Table 5 shows that the 73.33 per cent of the patients were using mustard oil and 21.67 per cent were using refined oil.

Table 5 : Types of cooking oil used by the patients

Particular		n=60
Cooking oil	Frequency	%
Mustard	44	73.33
Ghee	-	-
Refined	13	21.67
Any other	-	-

Table 6 shows that the 60 per cent of the patients did not skip meal followed by 35 per cent skipped once in a day and 5 per cent once in a week.

Table 6 : Frequency of meal skipped by the patients

Particular		n=60
Skipping of meal	Frequency	%
Once in a day	21	35
Once in a week	3	5
No	36	60

Table 7 shows that the 65 per cent of the patients had poor appearance and 35 per cent had fair appearance.

Table 7 : General appearance of the patients		
Particular		n=60
General appearance	Frequency	%
Very good	-	-
Good	-	-
Fair	21	35
Poor	39	65

Table 8 shows that the 96.67 per cent of the respondent had mild pale conjunctiva and only 3.33 per cent had severe pale conjunctiva.

Table 8 : Colour of the patient's conjunctiva		
Particular		n=60
Pale conjunctiva	Frequency	%
Normal	-	-
Mild	58	96.67
Moderate	-	-
Severe	2	3.33

Table 9 shows that the 96.67 per cent of the respondent had normal face colour and only 3.33 per cent had severe pale face.

Table 9 : Colour of the patient's face		
Particular		n=60
Pale face	Frequency	%
Normal	58	96.67
Mild	-	-
Moderate	-	-
Severe	2	3.33

Table 10 shows that the 96.67 per cent of the patient had normal colour of the body and only 3.33 per cent had severe pale of the body.

Table 10 : Colour of the patient's body		
Particular		n=60
Pale body	Frequency	%
Normal	58	96.67
Mild	-	-
Moderate	-	-
Severe	2	3.33

Table 11 shows that the 96.67 per cent of the patient had normal palm and sole colour and only 3.33 per cent had moderate colour.

Table 11 : Colour of the patient's palm and sole		
Particular		n=60
Palm and sole	Frequency	%
Normal	58	96.67
Mild	-	-
Moderate	2	3.33
Severe	-	-

Table 12 shows that the 100 per cent of the patient had anorexia problem.

Table 12 : Appetite condition of the patients		
Particular		n=60
Appetite	Frequency	%
Normal	-	-
Anorexia	60	100

Laboratory assessment :

The assessment showed that 58 patients had the serum bilirubin level in the range of 1.0 to 5.0 mg/dl which showed mild symtoms and 2 patients had the serum bilirubin level in the range of more than 10.0 mg/dl which showed severe symptoms in the patients (Gohil *et al.*, 2010).

All patients were done the ultrasonography but only severe patients were done ultrasonography, computerized tomography and endoscopic retrograde cholengiopancreatography.

Conclusion :

It was analysed that most of the person were suffering from jaundice but they did not know its sign and symptoms. There were minimum cases of severe patients. The male frequency was greater than female and all of them had appetite problem.

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